

**Notice of Allowability**

Application No.

10/053,857

Examiner

Albert W. Paladini

Applicant(s)

CHOE ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 1/18/02.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4/02,12/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Reasons for Allowance***

1. The following is an examiner's statement of reasons for allowance: None of the references cited or the art searched disclose or teach alone or in combination the method of simulating subsea mudlift drilling which includes the simulation of a kick at a selected depth in the wellbore as a two phase mixture comprising drilling fluid and a formation fluid, simulating controlling the kick by shutting at least one blowout presenter, opening the isolation line, circulating a formation fluid influx out of a well while an inlet pressure is adjusted to maintain a constant drill pipe initial circulating pressure; in combination and in the same relationship to the other steps of claims 1 and 29-31. None of the other art disclose a simulation of simulating subsea mudlift well drilling operations, which anticipate as many of the possible failure, and problem contingencies as recited in claims 1 and 29-31.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Relevant Prior Art***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Terry (5711383) discloses well drilling fluids and a method of drilling well bores where drilling fluids are placed in aging cells and rolled in a roller oven to simulate the circulation of the fluids through a well bore being drilled for various time periods. After aging, the rheological properties of the fluids at room temperature are determined.

Udarbe (6107256) discloses a method for controlling fluid loss in a well drilling operation where static ageing simulates the condition wherein circulation of a drilling fluid is terminated and the fluid is exposed to the temperature of the borehole for a time.

Harrell (6233524) discloses a closed loop drilling system, which includes a simulation program, which can simulate the effect on the drilling efficiency of changing any one or a combination of the drilling parameters from their current values. The surface computer is programmed to automatically simulate the effect of changing the current drilling parameters on the drilling operations, including the rate of penetration, and the effect on certain parameters relating to the drilling assembly, such as the drill bit wear. Alternatively, the operator can activate the simulator and input the amount of change for the drilling parameters from their current values and determine the corresponding effect on the drilling operations and finally adjust the drilling parameters to improve the drilling efficiency. The simulator model may also be utilized online as described above or off-line to simulate the effect of using different values of the drilling parameters for a given drilling assembly configuration on the drilling boreholes along wellpaths through different types of earth formations.

King (6612382) discloses an iterative drilling simulation method for enhanced economic decision making which includes obtaining characteristics of a rock column in a formation to be drilled, specifying characteristics of at least one drilling rig system; and iteratively simulating the drilling of a well bore in the formation. The method further produces an economic evaluation factor for each iteration of drilling simulation. Each iteration of drilling simulation is a function of the rock column and the characteristics of the at least one drilling rig system according to a prescribed drilling simulation model.

Maus (6668943) discloses a method and apparatus for controlling pressure and detecting well control problems, which include a simulation of the pressure, control system's response to a transient event when only boost mud control is used. The simulated transient is a five-minute shutdown of the surface mud pumps to permit the connection of an additional length of drill pipe.

Nice (6772843) discloses a sea floor pressure head assembly with software, which simulates the pressure experienced by the wellbore when the wellbore is filled with a

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high-density drilling fluid. The wireline tool is then traversed through the hydrocarbon producing wellbore for collecting data from within the wellbore.

3. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

August 19, 2005



Albert W. Paladini  
Primary Examiner  
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